MARTIN
U.S.A.
THE MARTIN STAR
March, 1943

CLIFFORD EVANS ROBERTS, Assistant Chief Engineer

Gambled and Won

CLIFFORD EVANS ROBERTS, who as assistant chief engineer helps direct the activities of well over 2,000 fellow-engineers, was born in Ridgewood, N.J., less than thirty-nine years ago. He passed through public schools and high school in a year short of the usual time, went on to the Stevens Institute of Technology in Hoboken.

He commuted by train each day to Jersey City, by subway to Hoboken, and by jitney to Stevens. At the end of the line he took chemistry, physics, football, steam, structures, lacrosse, machine design mechanics, and wrestling.

"As an athlete weighing around 130 pounds," he says, "I discovered the hard way the first rule of athletics: a good big man is tougher than a good little man. I was working out on the wrestling mat with a heavyweight—just horsing around, I thought—when the heavyweight suddenly took life seriously, clapped a grapevine on me, and fed me the pressure. I was laid up for repairs."

As a student he discovered something else the hard way. A kid of seventeen can't go to a tough engineering school where the rest of the crowd is twenty to twenty-five years old, spend hours of each day commuting, be a three-sport man, do a lot of social service work on the side, have a general good time, and still strike grim souls like physics and calculus profs as a budding Einstein. They didn't just fail Cliff: they flunked him.

"For the next year," he says, "I took my education into my own hands. As usually happens under such an arrangement, the education was more broadening than scientific. I drove a taxicab for a while. I ran a delicatessen store an uncle got stuck with. I sailed on a Red Star liner as bellhop. Then I signed up at Rutgers and got down to business."

In one of the labs was an old aircraft power plant that had been sulking off in a corner since the Armistice eight or nine years before. Cliff and a buddy named Kenneth A. Cool warmed the old girl up every morning with blow torches, started her with many a crank, made all sorts of thermodynamic computations on what she did next. They turned the computations in as a thesis, got their degrees, and signed up as flying cadets in the Army.

"The profs said we were crazy," he recalls now. "They said we were giving up a cozy future in steam engineering to gamble on aircraft."

Today one of the "gamblers" is high up in one of the biggest aircraft concerns in the country; the other leads squadrons of bombers that lay block-busters on Germany. Sometimes even profs guess wrong.

Meanwhile the pair had reported for training at Brooks Field, in Texas. Cool was one of the twenty men who won wings; Cliff was one of the 140 who didn't. He bought an old Ford chassis, fixed it up with a body out of a junk yard, drove up to Washington. There he borrowed $10 from Miss Olive Lee Thompson and drove on to the plant of the Atlantic Refining Company, for which he did some research and testing on new aircraft fuels and lubricants. Miss Thompson never has gotten her $10 back, though they have been married long enough to have a son and a daughter aged twelve and eleven, sixty-six acres of farm up in Harford County, and a house on it they designed themselves.

In 1929 Cliff came to Martin's as a design draughtsman. He became a specialist on wings just in time to be saddled with some of the thousands of "changes" he has wrestled with ever since. He moved on up through various posts, had on the way the curious task of translating the specifications and drawings of the Russian Clipper into the metric system and Russian nomenclature.

Then one New Year's Day Joseph T. Hartson, executive vice-president, called him to the office and made him project engineer on the biggest aircraft production job the country had yet undertaken—167-F's for the French Government. The order went out with a speed that gave point to President Roosevelt's remark about the arsenal of democracy.

Next Cliff became chief project engineer, with general oversight of the 187, B-26, PBM-3 and Mars jobs. Today, in his present post, he has all those jobs very much in mind day and night. Farming had always been his chief recreation; now such farming as he gets a chance to do is done by moonlight or under a system of outdoor lights he has rigged up. Those carefree afternoons of football and wrestling and lacrosse—like carefree afternoons of a few years back all of us remember—seem to him terribly far away and long ago.

THE MARTIN STAR

Published Monthly by THE GLENN L. MARTIN COMPANY, Baltimore, Md.

THEY lie somewhere in the deep Pacific, the five Sullivans. The five brave Sullivans, who went from the simplicity of a Middle Western town into an inferno off Guadalcanal, because the Japs had killed their chum, Bill Ball.

The five brave Sullivans need no tribute. Words are feeble and almost false, when they try to express the gratitude of the overflowing heart for the magnificence of sacrifice. The Sullivans are their own tribute, made so by their Americanism, their loyalty, their contempt of death if it must be braved for liberty.

The Sullivans were born in Iowa, in a town called Waterloo. The way they lived was as Middle Western as corn. Their father was a freight conductor on the railroad; their mother quiet and skilled in the housework that absorbed her.

None of the Sullivans was old. George Thomas was twenty-eight, Francis Henry twenty-six, Joseph Eugene twenty-four, Madison Abel twenty-three and Albert Leo (curiously enough, the only one married and living away from home) twenty.

Even their names have a kind of greatness—the American names proud parents give their sons!

They all worked together, the Sullivans, in a packing house. They went places together, to ball games and dances. They had girls and kidded them. They had a particular pal, the Bill Ball mentioned earlier, who lived in nearby Fredericksburg.

And when Bill was killed nothing on this earth could have prevented the five heroic Sullivans from enlisting. They went to the Navy in a body, insisting only upon two things: a crack at the Japs who had killed Bill Ball, and a promise that they would remain together.

What did *you* do today ... for Freedom?

They had their chance at the Japs. What they did and how is shrouded in the grim oblivion of death. But their cruiser, the *Juneau*, had a great part in the November battle off the Solomons, and the Sullivans being what they were. . . .

Too, they remained together. Somewhere they lie in the depths, possibly with little smiles on their faces for the way they avenged Bill Ball.

At home, in Waterloo, Iowa, the father and mother bear their grief as wonderfully as their sons bore their duty. When she was told that all her boys were missing in action, Mrs. Sullivan said:

"They used to end all their letters with 'Keep your chin up, Mother.' And that's what they'd want me to do now."

There is not a very great deal more to say about the Sullivans. They saw their job and they did it. They paid for it with the ultimate payment of all life . . . and from this brief summary of their lives, we can know that they made the payment ungrudgingly.

And when we think about them, our thoughts go to that challenging question in the middle of this page . . . that question which, if it is not answered proudly, is a blot upon the honor we owe the Sullivans—and all the other brave young men who are not coming home again.

The illustration reproduced with this editorial is used by courtesy of Collier's and the Magazine Publishers of America.

March 1943 ★ **EDITORIAL STAFF** ★ **Vol. II No. 2**

Editor: AVERY MCBEE *Managing Editor:* TERRY E. STEPHENSON *Associate Editors:* WADE CARGILE, ARTHUR W. PERKINS

Sports Editor: JOHN CAMPBELL *Photographic Editor:* R. L. ALEXANDER *Art Editor:* RAY HANSEN

Contributors: First shift: Eleanor Akin, Frank Anders, Vera Caffee, Milton Dokulil, Earl Dellafield, Norval Ewing, Ethel Florence, Robert E. Heidel, Walter Hughes, Sally Jones, Lila Jones, Carl Kozlik, Ruby Kreyzik, Ben Kubby, Bessie Lalich, Nina Louderback, Helen Linden, George Martin, Vernon Newberry, Myrle Pantier, Bertha Riesland, L. G. Roberts, Ed Rosenberger, F. D. Slater, Lillian Wickstrom, Audrey Wright, Zellis Zeller. *Second shift:* Virginia Bell, C. L. Blaser, Elizabeth Correll, J. G. Drawbridge, Jessie C. Henely, Frank McGrath, Henry Morgensen, Don Wilds. *Third shift:* Bette Billings, Doris Conley, Gertrude De Kalb, Rita Hollaway, Carl Lamp, Mary Alice McMillian.

Editorial Offices, The Glenn L. Martin-Nebraska Company

Enterprise + Ingenuity = Michaels

Enterprise is the word that sums up the Michaels family. Kenneth is supervisor in the Experimental Department of the plant. While he is at work, Mrs. Michaels conducts a nursery school in their home, 2405 Taylor Avenue.

Mrs. Michaels, who used to teach in Pennsylvania, corrals her eighteen young charges at various corners and brings them in an orderly procession to school. She carries with her a rope, to which the children cling — for safety in crossing streets.

Opening the daily schedule is a play period. Games and puzzles are arranged in the kindergarten room within reach of tiny hands. Mrs. Michaels explains the need for responsibility in play as in work.

"If I didn't do this," she points out, "some of the children would take one puzzle, play with it a minute and then toss it aside. This way they take more time with their decisions and enjoy it more."

Primarily, the youngsters are taught the right attitude toward other children. They are taught to think clearly. They learn to count to ten, some learning to count as high as fifty, and are instructed in printing their names legibly.

Some attempt drawings and sketches. The stories they hear they later dramatize. In mid-morning, they are given milk and cookies—and they serve themselves. A chart on the wall shows a full milk bottle, a napkin, a cookie or an empty milk bottle. The children whose names are written beside the full milk bottle know that they are to pass the drinks, while those whose names are beside the empty one, know that their job is to clear off the table.

Before the pupils are served, they count those present to be sure to serve the right number of cookies and amount of milk.

This year there are twice as many girls as boys. All are five. Next year they'll enter the first grade.

DEAN STEINBERG INSPECTS SCHOOL

Dean S. S. Steinberg, of the College of Engineering, and Professor William P. Greene, both of the University of Maryland, were impressed with the practical aspect of the Martin Company's Schools of Engineering and Inspection when they visited the Redwood Street building.

The dean was high in praise for the instructors. He pointed out advantages of the schools having adequate practical material on hand with which to work. In discussing the length of time spent in the schools by students, Dean Steinberg said that the high quality of work done by graduates speaks for itself. He likes to see students go from schools into plants.

The contrast between the four women in the University of Maryland Engineering School and the large percentage of women studying in the Martin schools was interesting to the visitors. If women needed anyone to champion their cause in the field of engineering, they would find an excellent one in the Maryland dean.

In the first place, it is a woman, Mrs. Miriam K. Gerla, who has chalked up a perfect record during her two years in the University's School of Engineering. In the second place, it is Dean Steinberg's belief that women engineers can bring to their field an esthetic talent often lacking in men. "Bridges," said the dean, "should not only be strong and practical but also beautiful." He suggested landscaping, home units, and other phases of engineering in which women excel.

★ ★ ★

CLAS HEADS GROUP

Election of E. Robert Clas, Experimental Department, as president of the Associated Stamp Clubs of the Chesapeake Area occurred in January. The clubs include memberships in Washington, Baltimore and other Maryland towns.

HOME FRONT. *While her husband is at work, Mrs. Kenneth Michaels conducts a kindergarten at their home. Above, her young charges are in the classroom with their teacher; at right, the famous knotted rope with which Mrs. Michaels collects and returns the boys and girls to their homes.*

CENTURY OF SERVICE. *T. B. Soden, H. F. Vollmer, W. C. Pike and H. J. Kramer reminisce about their long period of service with The Glenn L. Martin Company. All of them entered its employ twenty-five years ago this winter and spring.*

ANNIVERSARY OBSERVED BY MIDDLE RIVER USO

Martineers and their wives contributed a large share to the celebration of the first anniversary of the Middle River Chapter, USO, February 8.

There were two one-act plays, numerous solos, several brief talks, a ball and grand march and the birthday cake cutting ceremony. Over 1,500 persons from the plants and the Aero Acres attended.

Mrs. P. Henry O'Brien opened the party by playing "Happy Birthday." George H. Pickens, Production, acted as master of ceremonies. The Martin Minstrels, directed by Charles Swan, sang several numbers. Soloists included Martin Clark, Body; Kathy Rittler, Final Assembly; Charles Pugh, Production; Irene Ensor and Dolores Merritt. Ray Ensor, Production, was the accompanist.

The plays were "The Haunted Theater" and "The Red Lamp." The cast of the former included Bertha Porter, Personnel; Gus Lapari, Body; Don Boerma, Inspection, and Phyllis, his wife; Bill O'Connell, Body, and Mrs. Martha Lange. In the latter were Liddell and Mrs. Marguerite Munford, both of Inspection; Frank Barbara, Final Assembly; Paul Evans, Mrs. Patricia Cooper and Blanche Emala. Charles W. Selter, Inspection, directed both plays.

The formal ball followed, with music being offered by the Glenn L's under the direction of Charley Glenn, Body, Musicians included Bill Glenn, Bob Schultz, Andrew Hanley, Peter Guitz and Clarence Keska, all of Body, and Benjamin Morris.

The grand march was led by Mr. and Mrs. Otto Egner, Metal Bench and Welding, Army Division, and Mr. and Mrs. Earl Norwood, Surface & Floats. Avery McBee, director of Public Relations, and Frank A. Ruth, recreational director, spoke.

Decorated with an American flag and a large candle, the 10-pound birthday cake was cut by Mrs. Ida Mae Bartels, vice-chairman of senior hostesses; Charlotte Morriss, chairman of junior hostesses; David Handel, Surface & Floats, Mr. Ruth and Miss Elizabeth J. Kelly, director of the USO.

On the committees were: Mrs. Grace MacIntosh, refreshments; Mrs. Evelyn Norwood and Mrs. Barbara Neidringhouse, flowers; Mary Gruzs, Cafeteria, decorations, and David Handel, floor management.

★ ★ ★

SINCLAIR SETS RECORD

Sinclair Division is really going to town in blasting the Axis from the skies. A new production record was set recently for completed power-operated turrets turned out in one day's operations. These turrets arm our own ships and many others.

SHOWER. *Girls in Raw Stores office, B-26 Army Division, gave a shower to Mary E. McCollister at the Longfellow shortly before her marriage to Henry Betz of Drop Hammer.*

FOUR FINISH 25 YEARS OF SERVICE EACH

Milestone Passed by Vollmer, Soden, Kramer, Pike

Four Martin executives round out among them this spring a sort of private "century of progress" by celebrating their twenty-fifth anniversaries of service with The Glenn L. Martin Company. This is an unusal record for so young an industry.

The quartet, each of whom joined the Company early in 1918, are: Harry F. Vollmer, Jr., Thomas B. Soden, Henry J. Kramer and Walter C. Pike.

All four of the men began their careers pretty much at the bottom, but didn't stay down there long. Martin's was then out in Cleveland, making wood-and-fabric planes with some metal fittings—planes as famous in their day as Martin bombers are now.

Harry F. Vollmer, Jr., vice-president Manufacturing, is the oldest Martin employee, except Mr. Martin himself. Though hardly more than a youth when he started with Martin, he was already an expert toolmaker and metals mechanic. In six weeks he was foreman of the metal-fittings department. In four months he was general foreman of the Detail Manufacturing Department.

After World War I the industry, with Martin showing the way, moved closer and closer to all-metal aircraft. Mr. Vollmer had, besides his own increased responsibilities as a metals man, quite a job of diplomacy keeping disgruntled woodcraftsmen from quitting.

In 1923 he became factory superintendent; four more years and he was factory manager. The plant moved to Baltimore, turned out advanced bombers and the first transocean Clippers. Mr. Vollmer became a director in 1937; the next year assumed his present position.

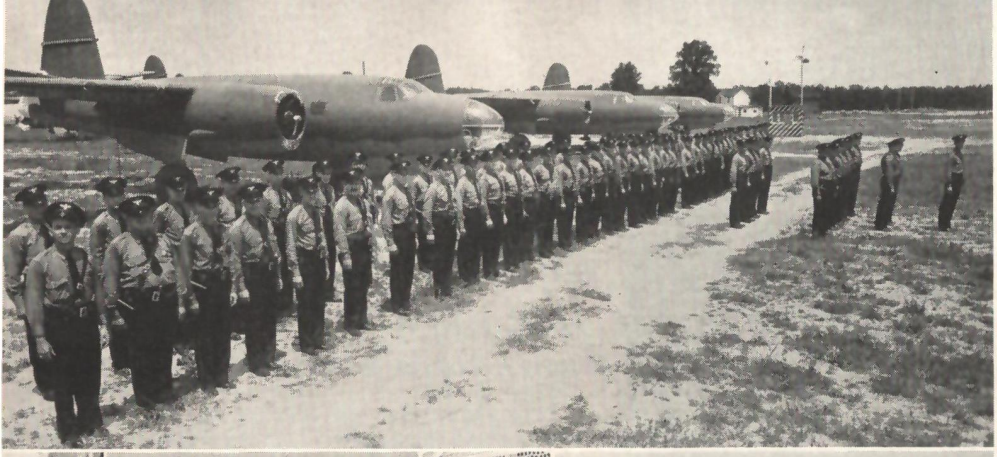
[*Continued on page 18*

MAKE IT 165!

Five Tool Design employees combine to complete a total of 65 years' service.

William Bankard, electrical group, is senior member. He was hired August 8, 1929. Joseph Luiciano, trouble-shooter, arrived November 4, 1929.

The other three are tool and operations writers. They are: Elmer Plowman, hired February 13, 1930; William M. Painter, hired March, 1930, and Robert G. Schauer, hired April 22, 1930.—JAMES O'NEILL.



ON GUARD. *Martin guards have a multitude of duties to perform. In top picture at left some of them line up for inspection. In lower right they are having regular target practice and in lower left one of the Army-trained dogs recently added to the Protection Department demonstrates what it would do to a potential saboteur.*

Protecting a War Plant

THROUGH a program of organizing and training that began long before Pearl Harbor, every square foot of grounds or floor space owned or leased by the Company used for manufacturing or in which vital supplies are stored is patrolled day and night by armed and trained men and women. The men and women form the guard force—several hundred strong—of the Protection Department.

The over-all job of the guards is to protect war material, premises and utilities from injury or destruction by the enemy or otherwise—a gigantic undertaking that breaks down into dozens of such subsidiary tasks as checking the credentials of every person who enters the plant areas, controlling motor and foot traffic, and maintaining order at all times.

The authority of the guard force is as far-reaching as its tremendous responsibility; besides being employees of the Company, all guards are sworn in as special policemen of the State of Maryland and as civilian auxiliaries of the United States Military Police. In the event of an air-raid or other extreme emergency, they would act directly under the orders of the United States Army, and would be subject to court-martial for failing to carry out any such orders to the letter.

In accord with the critical nature of their duties, involving as they do the protection of the country's very sinews of war, guards are carefully selected and trained. Each man or woman must pass rigid physical examinations, conform to certain educational standards, and stand a thorough character investigation both by the Company and by the Maryland State Police.

Organized on a military basis, the force consists of two companies of three platoons or shifts each. The Chief of Protection, E. A. Schurman, commands the force as a whole. Each company has a captain and each platoon a lieutenant and two or more sergeants. Company No. 1, commanded by Capt. L. P. Buchman, who is also Assistant Chief of Protection, guards Plant 1, all warehouses and storage places in and about the city, and the Fallsway, Canton, Sinclair and Redwood Divisions. Company No. 2, commanded by Capt. G. M. Sweet, protects B-26 Army Division, the Airports and Hangars.

E. A. SCHURMAN

The entire force undergoes periodic instruction in the use of firearms on the pistol range, military drill under the new manual, and instruction in military courtesy and in the scope and extent of their responsibilities as auxiliaries of the Military Police.

Recruits, besides receiving this periodic instruction along with the rest of the force, undergo constant direct training by their officers and experienced veterans. They master such details as the workings of the watch tour and fire-alarm systems, the geographical layout of the plants and buildings, the work and lunch periods of all departments, the traffic and parking lot systems, the operation of the badge and identification-card system, and the methods of inspection and control of all persons or things entering or leaving the premises.

In training and technique all of this represents a tremendous advance over the average industrial policing of a few years ago. Those were the days of the old-fashioned gatehouse presided over by the faithful old pensioner who remembered when this or that executive started out as a workman. The atmosphere of the gatehouse was leisurely, philosophical; its marks were the padded chair, the coal stove, the lantern, the old fellow's pipe and big can of tobacco.

In their place now stands the modern entrance, controlled by guards physically vigorous, mentally alert, neatly uniformed and armed, and charged with multifarious technical duties. The politeness is still there, but so is alertness; millions of dollars in fighting equipment and machines that build fighting equipment must be protected from possible smooth-talking spies, saboteurs, fifth-columnists and cranks.

The new techniques are of course now more or less common to war plants, but The Glenn L. Martin Company had a large hand in pioneering them. Mr. Schurman came here to organize the set-up after having headed the Florida State Police and the Uniformed Force of the United States Secret Service. He has published a 141-page book, "Plant Protection," outlining the techniques now standard.

Another important Martin contribution to the science of plant protection was the pioneering of the employment of women guards. At the time our efficient corps of uniformed women guards came into existence, many problems of organization and policy, now settled, were baffling enigmas.

More men and women work in the plants than live in any city of Maryland beside Baltimore. The guards are impressed at all times with the fact that it is their task, besides protecting the plants and equipment, to contribute to the comfort and safety of the thousands of persons who operate them.

Because of the thought and experience that have gone into their selection and training, the guards enjoy the confidence and cooperation of the thousands of their fellow-workers whose daily comings and goings they must to some extent regulate, and they mean to retain that confidence and cooperation. They are doing a fine, soldierly job.

Aids in Safety for Women Practical and Keep Charm Intact

HOW to dress for safety has become a commonplace subject. It has not, however, become out-of-date. As women undertake and successfully accomplish more difficult, and in some cases more dangerous, jobs, the need for precaution becomes proportionately important.

Dressing for safety does not ordinarily mean disregarding the eternal feminine desire to look attractive. We don't have to be convinced that slack costumes, flat heels, protected hair, and other attire that makes for safety is pleasing to the eye. Neither do we have to be convinced that where appearance and safety *do* conflict, appearance becomes secondary.

Flat heels, closed heels and toes, are musts. A protective head cover can't be stressed too much. Full skirts and gloves should *never* be worn around machinery; goggles should *always* be worn where there are flying particles. Rings, ear-rings, watches, and other jewelry which may catch in machinery are extremely hazardous.

No one will deny that gay bows perched in fluffy curls are pretty. But they don't make for safety! Flying hair, ribbons, and other hair ornaments can easily become entangled in machinery. And hair which may fall down over the eyes mars vision and may cause accidents. Wear a hair net that really holds your hair close, not one that flys as much as the hair itself. If you prefer, wear an "industrial turban," a soft rayon or cotton mesh turban that buttons on, or the attractive cap with bill and snood. But keep your hair under cover during working hours!

It is obvious that women intelligent enough to hold jobs in the plant will keep their heads well clear of machinery. The reason for wearing a protective head covering is quite different and highly interesting. Loose hair, even though some distance, is drawn toward revolving parts. We all know about electricity in the hair. There is also electricity in the machinery and there is an attraction between the two.

Use all of the safety devices and guards provided by the plant. If they were not necessary they would not have been placed there. Proper lighting is also a safety device. Use all of the light provided wherever and whenever you need it.

As Edward Burhorst, the Glenn L. Martin safety engineer, so well sums it up:

"The best safeguard is the safe worker."

★ ★ ★

FOUR BROTHERS IN SERVICE

Miss Betty Reus of Tool Design, Army Division, is justly proud of her four brothers, all of whom are members of the armed forces. Two were formerly at Martin's, Cadet Joseph Reus, U.S. Army Air Corps being in Inspection, Plant 1, while James Reus, U.S. Navy, was in the Engineering Department, Plant 1. Other brothers are Staff Sgt. John Reus, Jr., U.S. Army, and Pvt. George Reus, U.S. Army.

Mrs. Jones Gives Hints on Planning War Meals

Fit for a king and practical enough for a war worker.

That's what Mrs. Marie Jones' ("B" Building Cafeteria, first shift) boiled dinner recipe sounds like to us. First day: boiled ham, beans, and potatoes right out of the pot. Second day: cold sliced ham. And third day: baked ham omelet. Delicious and nourshing? Yes. And so lasting!

This isn't to suggest ham variations three days in a row. After the first warm dish, the ham may be put in the refrigerator and used on alternate days.

All home-makers know about boiling a nice, juicy ham over a low burner for a couple of hours or so, about adding beans and potatoes at the proper time. After this initial job, the rest is easy. Drain the liquid off the ham and serve cold, sliced ham at the table or in sandwiches. Use the end of the ham which is hard to slice evenly for the omelet.

Mrs. Jones' omelet recipe: Separate yolks from whites of eight eggs. Beat yolks, add 1 pint milk, 1 teaspoon flour, and ¼ teaspoon baking powder, and beat until stiff. Stir in one cup of ground ham. Beat whites until frothy (not too stiff) and stir into mixture. Bake in a moderate oven about 25 minutes. Will serve five.

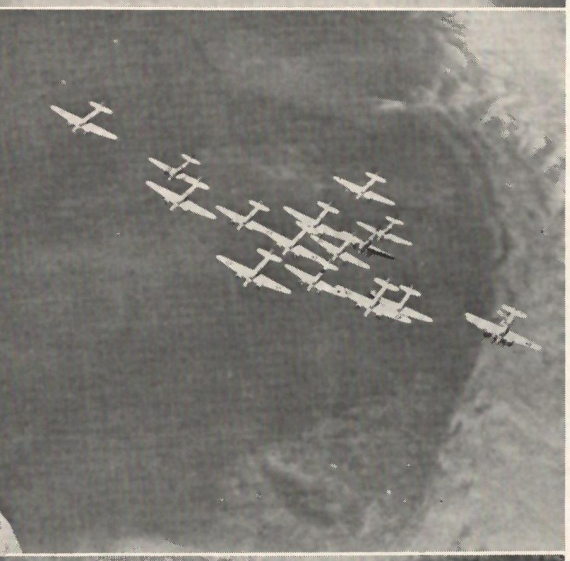
★ ★ ★

CLASSIC SUITS FOR SPRING

Indications point to a spring scene filled with classic suits, tailored coats, and simple dinner dresses.

War workers, as well as all busy women, love a suit that will carry them through the average day. Cozy and warm for cold days, the jacket may be slipped off when not needed. A fresh blouse makes a fresh costume. Chesterfield coats have the spotlight. Simple in line, they retain their smooth, tailored appearance and are versatile enough for sports or dress wear. Our dinner dresses, which are usually of street length now, are just as pretty as they are practical. Many are being shown in navy with splashes of white or color at the neckline.

SAFETY HINTS. *Margaret Meerdter, Body, Small Parts, Army Division, demonstrates some of the safety hints which help women in war work to work more safely and faster.*



Veteran of 24 Describes Life in Africa at War

Rapid expansion of the Martin plant has Paul Sanders, a slim, tow-headed, youthful veteran of a decade with the company, all confused. He hardly recognizes the place he left three years ago for the war fronts of Africa.

There wasn't any D Building or Army Division when Paul packed his grip and headed east to Capetown in December, 1940. He was only twenty-four then but had already been in France and French Morocco, although the war hadn't touched him yet.

Since then, however, Paul has seen a lot of war. He has suffered nightly bombing raids, been fired at by an aerial machine-gunner in the midst of taking tea, has been within a mile of an ammunition depot which was blown to bits and has celebrated two Christmases in Bengasi.

For five days, back in July of 1942, he was evacuated from his quarters in Alexandria to the ancient city of Luxor, 200 miles south along the Nile River. Field Marshal Rommel was only 70 miles west at El Alamein at the time.

He has lived through the three westward sweeps of the British and the three eastward offensives of the German and Italian forces in the North African merry-go-round. In Cairo he found time to court a French girl, Mlle. Clairete Sidky. They were married last September.

For his first six months in South Africa, Paul directed operations at an erection base for the 167's. Each plane came over in seven boxes, was assembled and flown to Egypt. He managed a trip to Addis Ababa in Ethiopia shortly after the Italians took over.

In July, 1941, Paul went to Egypt, where he did general trouble-shooting, contact and good-will work for the Martin Service Department with the British RAF with headquarters in Cairo. By the end of the year the 187's began arriving.

Sand was the big enemy at first, Paul pointed out. For months it clogged the engines, plugged the fuel lines and caused no end of problems. Finally, filters and air cleaners were installed and the Baltimores soon were creating a first-rate reputation against Rommel's Messerschmitts and Junkers.

One day ninety Baltimores in three squadrons were in the air. One squadron, the South African, spotted the start of Rommel's final retreat last fall — the movement which soon turned into a rout. From then on the Baltimores took to the air four and five times daily—flying about three and half hours per raid. After November, the Nazis were so scattered that more effective work was done by the fighter-bombers.

PAUL SANDERS

The B-26's started to come in last July and went into operation in September in the RAF Coastal Command.

Paul lost all but ten pounds of his clothing when evacuated from Alexandria. The rest were packed but were shipped to parts unknown. Prices are high in the Egyptian metropolis, too. A new suit costs $100. Cigarettes cost 75 cents. The hotel bill was $12 per day.

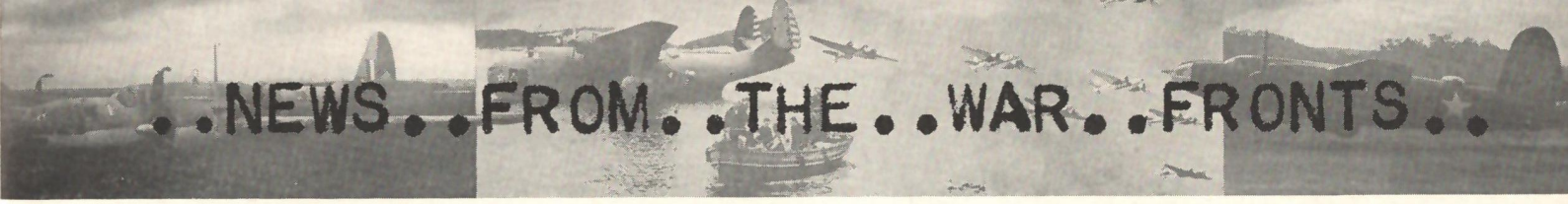
Last May and June at Gambut, he experienced nightly air-raids, but casualties were very light. The soft sand and 3-foot slit trenches prevented serious damage. At Fuka a Junker JU-88 dropped a bomb on a large ammunition depot loaded with 500 and 250-pound bombs. Paul was living only a mile away.

Paul also was at Basra, near the Persian Gulf, to set up an erection base. That was the hottest spot he's ever been in. Work was from 5 a.m. until 9 a.m. and then the laborers and mechanics knocked off until 4 p.m. He was at Karachi, in Northern India, for several days.

He's been across Palestine and had headquarters at Beersheba. Other trips were to Libya and Cyrenaica. He drove for three and half days along a wreck-littered route to Bengasi last autumn. The debris was from Rommel's fleeing forces.

Paul flew home via Central Africa and Brazil. He arrived in Miami on January 11. He expects to remain at home with his family a month, while re-educating himself as to the changes in 187's and B-26's. His brother, John, is in Final Assembly, and one sister, Virginia, is in Labor Control.

AFRICA FRONT. *The pictures at left were brought back by Paul Sanders and show the famous Marylands in the African war theater. The top picture was made in the fall of 1941 and shows a massed flight. The second photo shows 187's over Bitter Lake, with the Suez Canal in upper right corner. The third shot was taken at the same location, while the bottom one shows a flight over the Libyan Coast in June, 1942.*



B-26's Strike on All Fronts

Reports of the varied activities of the B-26 bombers on warfronts continued to flow in via War Department communiques. Extracts of more recent episodes follow:

February 5—Martin Marauder bombers struck the airdrome at Gabes with fragmentation bombs, scoring a number of hits, and with their escort fought a 40-minute running battle with Messerschmitt interceptors. An Allied communique said six German planes were shot down.

February 7—A B-26 Marauder participated in an attack that sunk two enemy vessels near Bizerte. The big bomber later sank near Cape Negro, 40 miles beyond, after being hit by a shell.

February 8—B-26 Marauders smashed the Naples water front by daylight, starting large fires and scoring hits on three ships in the harbor. Brig. Gen. Patrick W. Timberlake, chief of the U.S. Air Force bomber command, termed it one of the "most successful" attacks yet carried out by an American Air Force in the Mediterranean theater.

Marauders struck across the Mediterranean narrows to raid Caligiari in Sardinia. Aircraft on the ground was set on fire and bomb hits were seen on the air field, airdrome buildings and on the seaplane station.

February 9—Two "very successful" daylight attacks were made by Martin Marauders of the U.S. Twelfth Air Force on the enemy air base at Caligiari, Sardinia. Marauder groups downed two enemy Messerschmitt 109's. All American aircraft returned safely.

Marauder medium bombers made a coordinated attack on the airdrome at Gabes. In a running fight from Gabes to the Algerian border Marauder bombers shot down six ME-109's. Large fires sprang up in the buildings and among parked planes while two anti-aircraft positions were silenced at Gabes.

February 10—American Marauders struck heavily at vital Axis bases in Tunisia. Eighteen Messerschmitt 109's and Focke-Wulf 190's were shot down in a bitter air conflict that raged from Gabes to the Algerian border. Only five American planes were lost. The Gabes airfield was covered with bom burts in the north and east areas and large fires were started in buildings around the field.

★ ★ ★

Rats Have Big Ears.

FORMER MARTINEER WITH 2 NAVY CROSSES VISITOR

Praise of our planes and a plea for more and more of them comes from Lieut. Charles F. Willis, one of the few Naval aviators to win two Distinguished Flying Crosses. Lieutenant Willis, a former Martineer, worked in the Sub-Contracting Department till he went in the Navy. He visited the plant recently, had lunch with Mr. Martin, and called on friends he had worked with while here.

Like most true heroes, Lieutenant Willis is genuinely modest about his exploits; it was with some difficulty that he was brought to mention at all the fact that he had sunk a Jap cruiser and destroyer and rescued from 400 miles behind the Jap lines a party of Army flyers who had crashed. It was for these feats that he won the unusual honor of two Distinguished Flying Crosses.

"If I must be put down as saying anything at all," he said earnestly, "I would like to get two points across to the people I used to work with here. One is the need for more and more of our planes. The planes are darned good but the fellows out there need every single one you can send them. The fellows appreciate more than I can tell you any sacrifice you care to make to get planes to them.

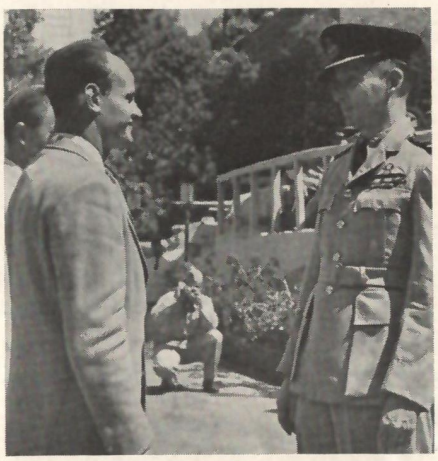
"The other thing is the heroism of the Marines who fought on Guadalcanal. I don't believe it is possible to put into words how heroic those men are. They fought in conditions that cannot be imagined; they were bombed every night and shelled every day. In between there was constant hand-to-hand fighting with Japs. The Marines showed themselves supermen."

On the morning of December 7, 1941, Lieutenant Willis was stationed at Kanelohe Air Base, across the island from Pearl Harbor. The Japs bombed and strafed the base a few minutes before attacking Pearl Harbor. Lieutenant Willis got a bullet through one hand and a piece of shrapnel through the arm. He was out of the hospital and in action in a few days.

Even more picturesque than his sinking a Jap cruiser and destroyer was his feat of rescuing the party of Army flyers from 400 miles within the Jap lines. His commander asked for volunteers to rescue the men and Lieutenant Willis won the assignment.

Where Lieutenant Willis will go after his brief furlough is up he does not yet know.

VISITOR. *Lieut. Charles F. Willis inspects models with Glenn L. Martin and H. F. Vollmer.*



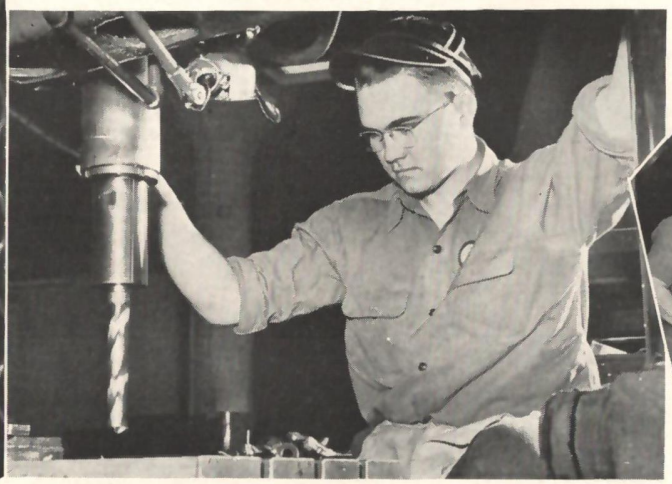
AWARD. *Michael Vince, Glenn L. Martin Company technician in North Africa, is shown just after he had received a letter of commendation from Air Chief Marshal Sir Arthur Tedder. The letter was written on behalf of the Royal Air Force and the presentation was made at Middle East headquarters. Another Martin service representative, Paul Sanders, received a similar letter.*

A TRIBUTE

"Baltimore bombers made six sorties against the enemy to our immediate front. It is an awe-inspiring spectacle. They are ten times more formidable than the Stukas. They are the perfect answer to our entreaties for dive bombers. They fly in massed formation over their target and unload themselves in unison. Nothing can live beneath them."—From "We Chase the Desert Fox" by Sgt. J. A. Brown; *The Saturday Evening Post*, February 13, 1943.

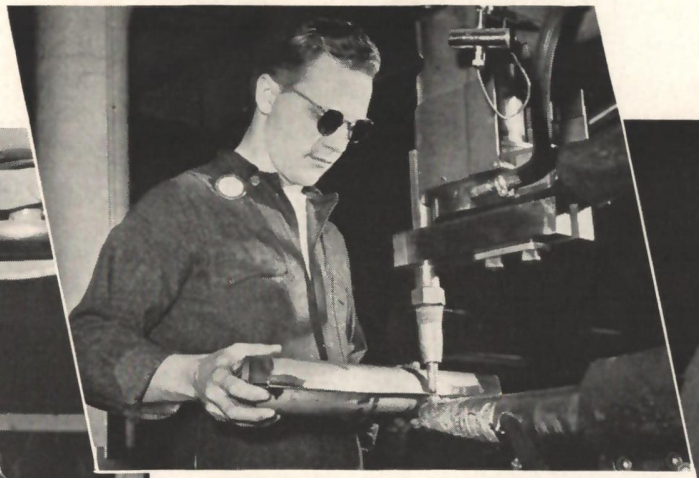
While Most of these Nebraska

CAGED. It's three o'clock in the morning, but Loretta Bruker is wide awake and on the job. Her husband works in Final Assembly, third shift.

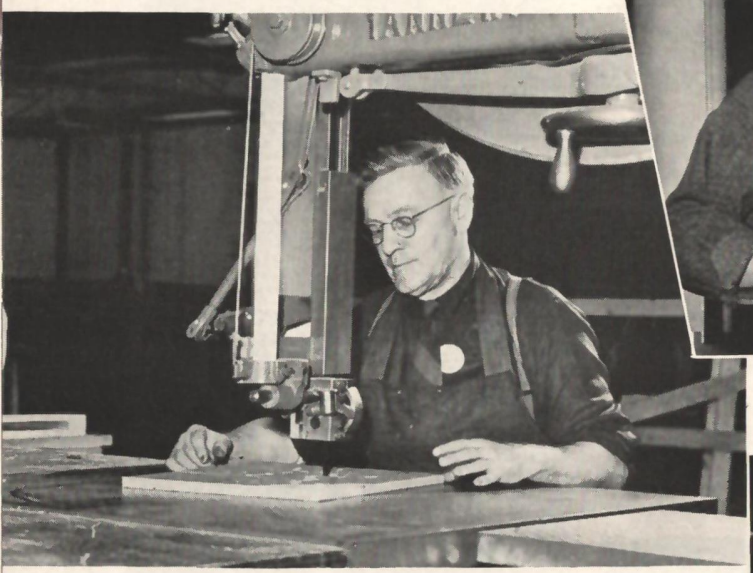


SPECIALIST. Warren Heidtbrink, second shift drill operator, learned the secrets of a Radial drill at the NYA trade school. Today he is considered one of the best.

THIRTEEN ROSES, ONE T
fication Cafeteria, second shif
workers take time out for a pic



SPOTTER. Paul Walde, a transfer from Baltimore, does spot welding on the third shift. He's considered tops in his particular type of work.



WANTS QUICK VICTORY. With two sons in the armed forces, E. H. McAllister, Woodshop, second shift, is doing all in his power to help speed the bombers on their way.

CHECK UP. Modific
second shift, and Inspe
final check before appro
R. W. Hawn, Thelma F

FROM PLOWS TO WEAPONS. He'd rather be farming, but Wesley E. Sohl has put aside plows for the duration. Working on second shift Final Assembly, his two brothers also help build Marauders on the second shift.

CHECKING IN. Second Shift Guard D Jacobson is pictured checking a lunch box owned by Modification Worker Fred Prohaska. Charles Teague waits his turn.

CONCENTRATION. W. D. Steigerwalt, third shift welder, couldn't take time out for a picture. The job was too important and demanded complete concentration.

CURLERS TO BOM
who formerly operated
helps turn out bombe
uling division, Produc

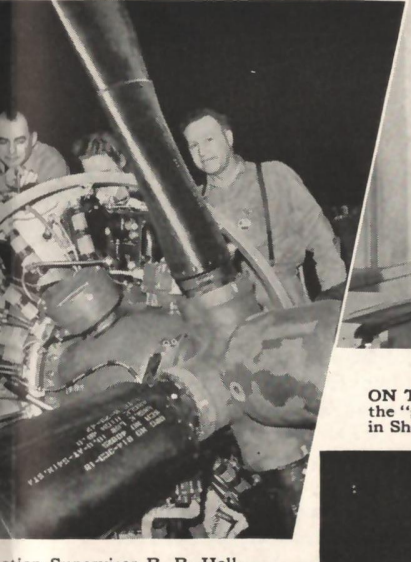
the World Sleeps, ns Get 'em Flying

HORN. Chef Lester Lynch, Modi-
t, and a baker's dozen cafeteria
ture just before the midnight rush.

PIES, HER HOBBY. Lela Farris, Modification Cafeteria, second shift, makes pies for the fun of it. The results of her hobby have tickled the palates of more than one worker at the Martin-Nebraska plant.

DAD AND DAUGHTER. J. B. Doyle, chief timekeeper, Modification, second shift, tells his daughter, Mrs. Madeline Rasmussen, Assembly, second shift, to be a "little more careful about punching that time card."

PROSPECTOR. Third Shift Personnel Chief Herb Kaufman is pictured here checking through files listing prospective Martineers. His is a lonely job.



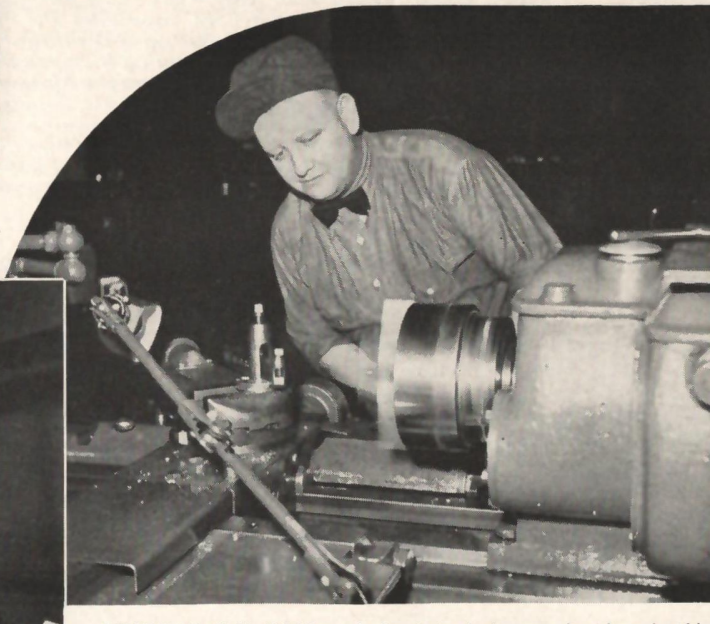
ation Supervisor B. B. Hall,
ector W. B. Johnson make a
oving an intricate installation.
Read and O F. Basch look on.

ON THE NOSE. Virginia Butler, third shift, works in the "green house" while her husband helps get 'em flying in Sheet Metal where he is employed as a sub-foreman.

MISTER AND MISSUS. With one son in the Army Air Forces and three other children at home, Mr. and Mrs. George Trumm, Small Parts, Modification, second shift, have left their farm and gone to work on the production front. The farm, incidentally, is still in operation.

BERS. Nellie M. Brown,
a school in beauty culture,
s on the third shift, sched-
tion Department.

TEAMWORK. These two young mothers, former classmates at Tech High, make a good third shift team. Mary Kenney wields the rivet gun while Lavon Brown bucks the rivets from the other side.



VETERAN. S. V. Aldridge, who fought in the last war, is at it again, this time on the production front. He runs a lathe in Modification machine shop, third shift.

HERE'S WHERE BATTLES ARE WON. *The Austrian paper hanger won't enjoy the set of pictures presented here, especially the view of the Martin-Nebraska Company's final assembly bay at the top of the layout. Like a football field in some respects, the big ships are shown heading for a touchdown. In the center and to the left are the men whose job it is to keep the Marauders driving toward the door. They are, from left to right, Final Assembly Supervisor Tyler, Assembly Supervisor Burt, Assembly Foreman Winstead, Assistant Factory Superintendent Sargent, Assistant Supervisor Bailey and Sub-foreman Elliott. In the center and to the right, workmen are pictured splicing a wing onto one of the cirgar-like hulls. Below is a general view of the final assembly floor showing long lines of center and nose sections moving toward final assembly.*

Spaghetti Hostess

Recently, Bessie Lalich, Purchasing Department Modification, was hostess at a spaghetti dinner at her home in honor of Don R. Olson, who joined the Army Air Corps and is now stationed at Big Springs, Texas. Guests at this smart affair were: Mr. and Mrs. Ray Hansen, Dr. and Mrs. Harold Kappus, Mr. and Mrs. Richard Alexander, the honored guest, Don Olson, and Mr. and Mrs. Tom Brown.

He's Tops

Here's one man you can look up to.

His name is Karl G. Von Glan, Machine Shop Modification. This young man is a recent addition to the Martin-Nebraska Company, and according to reports, has already gone about as high as possible. The reason for this belief is found in the fact that Von Glan's head soars above the common herd. He is 6 feet 7 inches tall.

Final Assembly, Nebraska, Like Track Meet

The home front, according to Capt. Eddie Rickenbacker, is the most important front in our war effort. It is here that the major battles are won or lost.

The final assembly line at the Martin-Nebraska plant is typical of the "home fronts" that are giving full support to the men in uniform on the nation's far-flung battle fronts. On this assembly line may be seen the makings of victory; B-26's in various stages of assembly, heading for the big doors that open onto the ramp and thence to the paint shop, and eventually to the airport for final checking and testing before taking off to some distant combat zone.

This final assembly line can be likened to a great football team. In the "huddle," the three sections of the "miracle" ship are brought together. Then the lines are formed for the speedy dash to completion, which in appearance is as smooth and rhythmic as a well-executed touchdown play.

First, each of the three main sections of the B-26 is made ready for the splicing, which takes place at one end of the huge final assembly "bay." The nose, center and rail pieces are moved into position on splice jigs, mounted on rollers, and are then joined together. This gives the Marauder the appearance of a huge silver cigar. From here the hull is lifted by an overhead crane and lowered into the after splice cradle, where the wings, motors, landing gears and fins become a part of this war-bird.

As the huge, graceful ship moves on down the final assembly line, hundreds of skilled workmen swarm over it, and with clock-like precision add hundreds of minute parts, giving the Marauder the heart that makes it the toughest, deadliest medium bomber in the air.

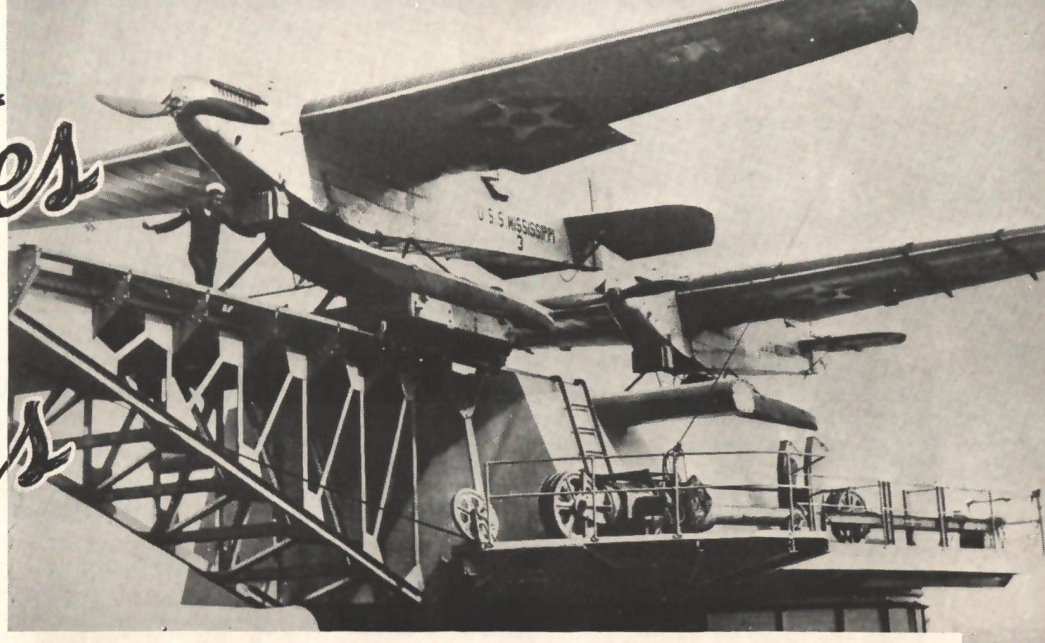
As the hulls are lined up for their final sprint down the line, they take on the appearance of sprinters at a track meet, waiting for the starting gun to be fired. As the "race" gets under way and the ships move along, necessary additions and installations are made while inspectors climb over the hulls, looking for any possible defects that might necessitate adjustments or delay production. Usually, there are none to be found.

Finally, as the big doors of the assembly bay open, another B-26 Marauder rolls out and is ready to be taken over by the Army. Many steps still remain, however, before this "fightin'est" bomber is ready for combat.

★ ★ ★

One Leak Can Sink A Ship—Don't Talk.

Box Kites to Bombers



CHAPTER XIII

That the *Ostfriesland* incident was the germination of the Navy's real air forces is not to be doubted. Airplanes could sink ships—that had been demonstrated, so the new Bureau of Aeronautics set about without delay to explore the capabilities of the winged weapons. And it explored them very thoroughly, for in the next few years numerous "X" (experimental) projects were instituted with aircraft manufacturers.

The Glenn L. Martin Company was in the van, and the nineteen-twenties saw some interesting developments. In April, 1922—a few months after the sinking of the warships off the Virginia Capes—the Navy awarded the Company two contracts, one for three M20-1 observation planes and another for six MO-1 observation planes.

These MO ships were unusual indeed. Designed to mount either landing wheels or floats, they were amphibious in character. But that was not all. Experiments proved that it was practicable to catapult the airplanes from battleships. The Navy had previously catapulted smaller airplanes from the decks of warships, but this was the first time it has used ships of considerable size.

The MO-1 was the first all-metal seaplane and there was some excitement about it. In fact, a new contract for thirty more was signed three months after the first one flew. It was a high-wing, cantilever monoplane, powered with a Curtiss D-12, 375-horsepower engine and it was used in short-range observation with the fleet, as well as in shore-based missions. It carried a crew of three.

It was about this time, incidentally, that another milestone was marked by Martin in the development of a supercharged airplane—a special MB-2 Army bomber—in which Capt. A. W. Stevens made his incredible parachute record from 24,206 feet over McCook Field at Dayton. That was in June of 1922, and in August Lieut. Leigh Wade took it to 23,350 feet for a new altitude record for an airplane with three passengers.

Early in 1923 Martin also developed the N2M-1, a new-type training plane for the Navy, and almost simultaneously won a contract from the Air Mail Service for three night mail planes of special design. All of this in addition to the continuing production of MB-2 models for the Army.

The Navy was overlooking no bets. Having acquired airplanes that could be used as the eyes of the battleships, it decided to explore the possibilities of eyes for submarines.

On April 17, 1923, the huge doors at the Cleveland plant, which had discharged many a twin-engined leviathan, opened and a tiny mouse of a seaplane scuttled out. It was the first of a half-dozen MS-1's, the little submarine scouts which were intended to range ahead of submersibles, find victims and then fly back to be taken aboard. "Ducky" Pond, the test pilot, grinned appreciatively as he all but pulled the plane on over himself as he took his seat. But the little ship, its three-cylinder radial engine chattering noisily, took off nicely and Clevelanders got a belly laugh when a giant MB-2 swooped close to it. They looked for all the world like an aerial cow and calf.

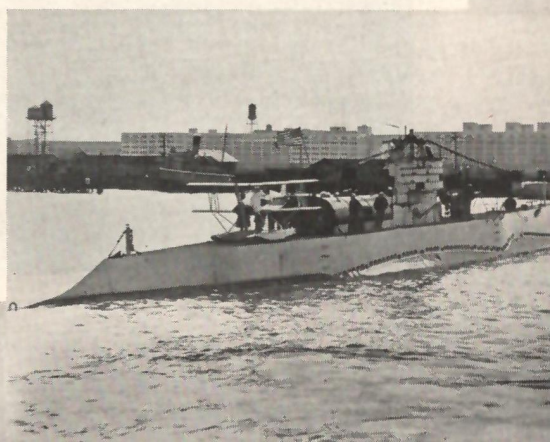
The Navy developed a technique for use of the submarine scout. The submersibles would submerge partially and bring their decks up under the floats of the MS-1 lifting it high and dry. The removable wings would be lifted and the fuselage would slide into a special tank-like container on deck and the wings placed in after it. The tank would be closed and the sub would move off on its mission, reversing its procedure to launch the scout. The MS-1 had a wingspan of 18 feet and an overall length of 17 feet. It stood 7 feet 6 inches high on its tall little pontoon structure and it had a speed of 100 miles per hour.

The Glenn L. Martin Company facilities at Cleveland were being used to the last square foot of floor space by now. With Army and Navy production lines crowded and Experimental constantly toiling with new specifications, business was booming.

It was at this point that Glenn Martin's financial backers imposed on him the soubriquet "The Grounded Falcon." He had been one of the world's greatest flyers, but bankers and insurance men thought it ill became the president of a big company to be flying tricky new military airplanes around. Besides, they weren't sure it was safe.

Then came another important development in naval aviation. Without know-

[*Continued on page 18*



FOR THE NAVY. *Two MO-1's perched on the deck of the U.S.S. Mississippi. At left the T4M-1, the first successful large plane for aircraft carriers. To the right is the submarine scout plane, model MS-1.*

"Bond-Buying the Axis Into Ruin"

It was a sad day for the Axis when Charles E. Fryer, Final Assembly, and Henry J. Schutt, Metal Bench, bought $4,000 worth of "Victory Bonds." These two production workers are taking this war seriously, and if buying bonds will help end this struggle quickly, they hope to "bond-buy the Axis into defeat." Each has bought bonds valued at $2,000.

This greatest of all world's upheavals is being fought by thousands of conscientious Martineers, who are showing, by their purchase of bonds, that their part in this fight isn't just building bombers.

Schutt, who works on second shift, is putting all his earnings into bonds. Married, the father of two children, he lives at 3911 Davenport Street, Omaha.

Fryer, who joined the production front in June of last year, is married, the father of two children, and makes his home in Council Bluffs.

LARRY HEFFNER

"He'd make you believe we descended from Japs—"

Panama Hatties

The lure of the tropics prompted five of the "fairer" Martineers to desert the cold winds of Omaha for the sunny clime of Panama, where they will work with the U.S. Army Engineers.

Agreeing to stay at least six months, Kathryn Haller, Personnel; Thelma Barrett, Inspection; Ellen Craddock, Inpection; Veryl Wehmeyer, Inspection; and Myra Hokanson, Production, left recently to fulfill assignments as secretaries and clerks at this bustling southern outpost.

★ ★ ★

What, No Pearls!

Fourteen Martineers, several of them former residents of Baltimore, enjoyed a typical Chesapeake Bay oyster feast recently at the home of Wade Cargile, Public Relations. The oysters, still squirming in their shells, were sent to the Nebraska Company's photographer, R. L. Alexander, by his father, who is a resident of Baltimore. For five solid hours oysters were consumed in every style imaginable —there were raw oysters, fried oysters, stewed oysters and steamed oysters . . . but no pearls.

★ ★ ★

Idle Words Equip the Fifth Columnist's Workshop.

Bride Honored

Twenty-two feminine members of the Purchasing Department gathered at the Blackstone Hotel recently to honor Miss Darlene Dresler, a member of that department. Miss Dresler was married to Aviation Cadet Jack Daly, in a military ceremony at San Antonio, Texas, on February 19, the day following Cadet Daly's graduation from flight school at Hondo, Texas.

KRUDGEONS!

H. H. Shipley, general foreman at Modification, according to reliable information, forgot to let go of the ball during a recent bowling match. As a result, he is suffering from a badly wrenched knee. His limping, instead of bringing words of sympathy, only results in unsolicited wisecracks.

According to Shipley, there were some Krudgeons messing around with the ball at the time.

Wedding Bells Ahead

Center aisling in the not too distant future will be two young ladies in the Purchasing Follow-up and their husbands-to-be.

Ann Hamtak has announced her engagement to Virgil Rathovic of Omaha, and Betty Sweem has revealed plans to wed Ed Redding, lead man in Final Assembly. No dates for the weddings have been revealed.

Adam Nashleanas and Sophie Ratkiewicz, both of Modification Inspection, have also announced their engagement.

'WE REALLY NEED THOSE MARAUDERS'

J. J. Ward, formerly employed in the Martin-Nebraska Company's Inspection Department, in a recent letter to the Company's attorney, Bob Hotz, urged Martineers to "keep 'em rollin'."

Now stationed at the Santa Ana Air Base in California, Ward had this to say:

"Keep 'em rollin' out there in Omaha. We really need the good old B-26. If I had known how badly they were needed when I was with you, I'm sure that I could have put more effort into my work. One realizes that when you see things from the Army side.

"So, you keep 'em rolling out and we'll keep 'em flying.

"Tell the gang how important this job is, and tell them not to forget that 10 per cent for Uncle Sam. With me, it's 75 per cent as long as it's needed."

★ ★ ★

WAS IT?

Reports from North Africa report German Marshal Erwin Rommel has been wounded at Sfax. A lot of B-26's have been there. Was it a Marauder that got him?

A civilian's prayer

Help me, Almighty God, to be the only kind of hero I can ever be.

Help me see how important it is that I go *gladly and energetically* about the humdrum business of saving my tires and my fuel, of spending less and saving more, of eating less and working harder, of asking less and giving more.

Help me see that while the war may be won no matter what I do, the light we fight to keep alive may go out because of what I prove myself to be.

Help me to realize that Americans are fighting today, not to create freedom and opportunity for the ruthless and greedy, but to make it possible for kind men, men of integrity, responsible men, to work in peace, and to work for the common good.

Help me realize that these fighting men—indeed, the good men and women of the whole world—are waiting now for one small but all-important sign from me:

They know I can't join them in the blood and dirt. But they want to see if I will *seek responsibility*. They wait now to see if I need merely to be led to do my part, or if I must be *driven*. For that will tell them if their spirit is also my spirit, and their purpose mine.

Help me not to fail them. Amen.

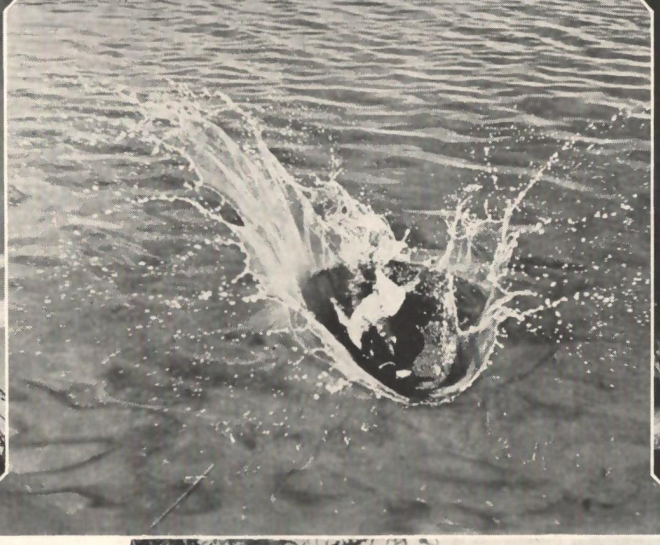
Patriotic Second Shift Comes Through

Employees at the Modification Center recently decided they wanted flags to be hung in strategic spots throughout the building. It was suggested that contributions be accepted for the purpose of buying the necessary number, and B. B. Hall was asked to handle the arrangements.

Second shift employees decided that since the idea originated with them, they wanted to complete the project themselves. Consequently, the entire sum was donated by these dusk-to-midnight workers.

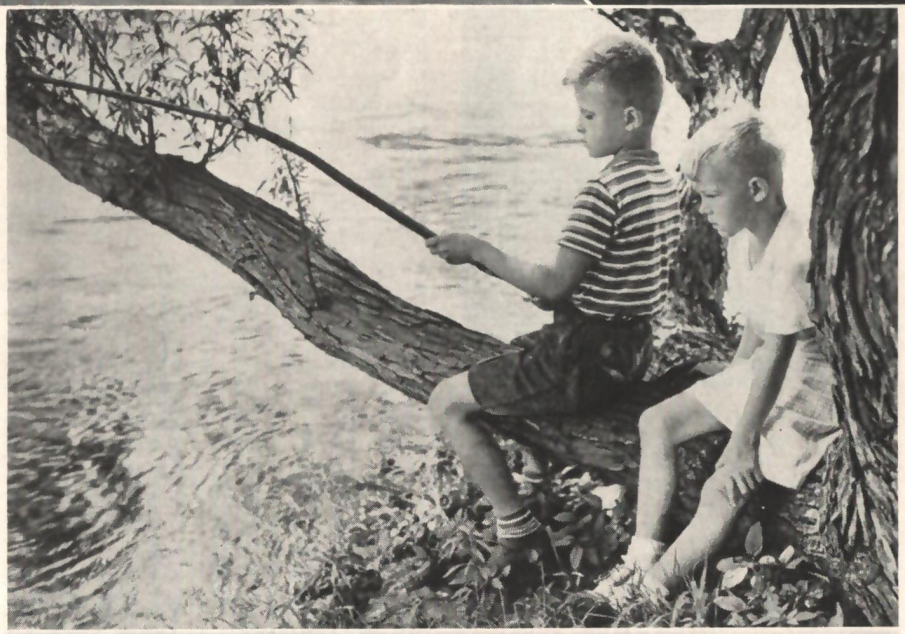
In appreciation, a member of the first shift wrote "An Ode to the Graveyard Shift," which ended:

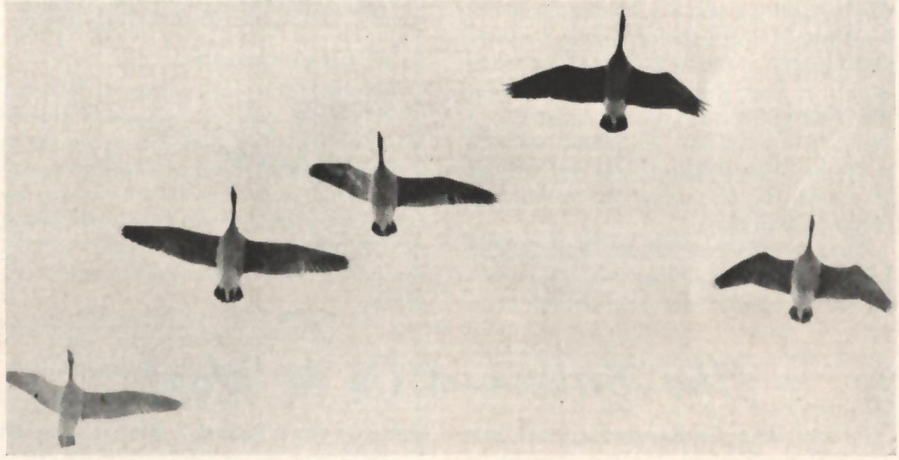
"*. . . We shall always have freedom—they'll keep it alive;*
And in wars to preserve it they'll ceaselessly slave,
So that always their Star Spangled Banner shall wave."



HIS CAMERA MAKES ART OF ANIMALS

All men have their failings, and Bert Popowski, one of the newest recruits to Personnel ranks at the Martin-Nebraska Company, admits he's happiest when he can get camera and film together to indulge a passion for outdoor photography. Two of the three photographs shown on this page are prize-winning products of his talented lens. To supplement his photography, Bert also writes for most of the outdoor magazines, three of his articles appearing in current (February) issues of *Outdoor Life*, *Field & Stream* and *Outdoors*. During the past seven years he had published nearly a hundred articles in various outdoor magazines, and at one time was an associate editor of *Look* magazine.





THE PHEASANT HUNTER: This photograph served as a frontispeice for *Sports Afield* magazine some months ago, and has also been published in *Minicam Photography*. It was taken under rather unusual circumstances, in that it pictures the photographer who did his own focusing and composition, slipped a K2 filter over the lens to bring out the clouds, set the self-timing shutter in operation, and then stepped in front of the camera lens so his body shielded it from the sun's rays. Taken in South Dakota, it shows two of that State's outstanding game birds—ring-neck pheasants.

FALLING MALLARD: A picture calculated to prove the lens much quicker than the eye, is this shot of a greenhead drake tumbling out of the sky and smashing a pan-like hole in the surface of its home lake. Taken on a duck-hunting expedition two years ago, this picture awaits publication in *Field & Stream* magazine.

GREAT HORNED OWL: The result of boundless patience and unbelievable luck—plus a camera equipped with a synchronized flashlight attachment, this was a national prize winner in a contest sponsored by the Association of National Audubon Societies. Taken shortly before midnight, it shows one of least known and most ruthless killers of the animal world. A moment after the picture was taken, the startled bird dropped its prey—a young rat, permitting its identification.

TWO BOYS FISHING: Long exposure to their Dad's photographic failings has made hardened accessories of John (left) and Jerry Popowski. They're twelve and ten years old, respectively, and think the family cabin, in the pine-clad Black Hills of western South Dakota, the perfect vacation site. Here they're trying to snake out a bullhead for the family frying pan—while the camera lens looks on.

FLYING GEESE: The despair of his hunting cronies, because he is more likely to shoot with camera than with gun, Bert caught these five Canadian geese coming over—blissfully unaware that sudden death lurked below. Taken near Platte, South Dakota, one of the nation's finest goose-hunting areas, the picture awaits publication in *Outdoor Life* as illustrative support for a hunting story.

Sportsman, Linquist, Auditor

LANGUAGES HIS MEAT. *AAF Auditor George Lackey, who cashed in on a hobby, takes to foreign languages like a duck to water. Translating the original works of Homer, Xenophon and others is a favorite pastime.*

The life of a Certified Public Accountant may seem a dull sort of existence to the average person. Long columns of figures, balance sheets and red ink hold few charms.

Perhaps that is why George Lackey, Army Air Forces auditor stationed at the Martin-Nebraska Company plant, decided to jump into one of the fastest and most exciting games in the realm of sports, ice hockey. Some years ago, while working in the New York offices of Price, Waterhouse and Company of Landon, Lackey decided to hitch his wagon to whatever star it is that guides public accountants. A graduate of Westminster College prep school and Washington University at St. Louis, Missouri, he felt qualified to start the career that eventually landed him at the Martin-Nebraska plant.

He began studying, and after obtaining his CPA certificate from the American Institute of Accounting, moved to Tulsa, Oklahoma, where he went into business for himself. Later, he joined the Oklahoma Natural Gas Corporation, an 80,000,000-dollar concern, the largest of its kind in the United States. It was while serving as the firm's comptroller that Lackey saw an opportunity to participate actively in his favorite sport.

He heard that the franchise of the Tulsa hockey team was on the market. For some reason or other, there were only a few who were interested in purchasing the team. Lackey grabbed at the chance, and suddenly found himself owning the Tulsa Ice Oilers. That was eight years ago, and although ice hockey has been more or less shelved for the duration of the war, Lackey still holds the franchise, and has contracts with several former Tulsans now playing in eastern leagues.

It was Lackey and his Tulsans, incidentally, who introduced ice hockey to Nebraska fans when Omaha entered a team in the American Hockey Association.

A man who has a keen sense of humor and a personality that would put even Dale Carnegie to shame, Lackey has made many friends since coming to Omaha. A member of the Presbyterian Church, Rotary Club, Chamber of Commerce, University Club, Cedar Crest Country Club and numerous charitable organizations, he still finds time to indulge one of his favorite hobbies . . . languages.

This particular hobby, incidentally, serves two purposes. First, it provides an interesting pastime, and secondly, according to Lackey, it tends to keep his mind alert. He can read and write seven different languages, and has translated from the original Greek the works of Homer, Xenophon and Euripides.

Heads for Panama

Veryl Wehmeyer, Modification Receiving Inspection, has left the Martin-Nebraska Company for an area where mosquitoes are more numerous than B-26's at Fort Crook. Miss Wehmeyer, who first joined the Martin Company in January of 1942, has accepted a position with the War Department, and will be stationed for the next six months at Ancon, Canal Zone.

Miss Wehmeyer, whose home is in Lincoln, Nebraska, expects to be in foreign service for the duration of the war.

Just Like Home

The fact that Jack Gleason, formerly of Raw Stores Accounting, was drafted into the Army had little effect, insofar as a change in his scene of operations was concerned. According to information received by friends at the plant, Gleason is now stationed at Fort Crook, watching the bombers fly from the other side of the fence.

THRILLS 'EM. *Paul Floyd, Production, is singing his way to fame. His rich tenor voice thrilled music lovers of Omaha recently when he sang one of the leads in the operetta "The Merry Widow."*

The Sullivans Go to War!

At the Raw Stores Department one day last week, hard-working Donald L. Sullivan stopped long enough from his job, building bombers, to talk about his six sons now fighting in the armed forces of the United States. "I'm mighty proud of those boys of mine," drawled Sullivan. "They were always in the thick of things, even as youngsters," he continued. All six of the boys attended school at Bellevue, Nebraska, where they distinguished themselves as outstanding students and athletes.

There is Leo, age twenty-six; Harold, twenty-five; Raymond, twenty-three; Leonard, twenty-one; Jack, twenty, and Robert, eighteen. These are the boys who make up this "fighting" family. Not all the Sullivans are at the fighting fronts or on the production lines, however, for five more young Sullivans are at home, helping whip the Axis by buying bonds, collecting scrap metals, and aiding in every other way possible.

It is no wonder that the personnel of the Raw Stores Department as well as the entire Martin-Nebraska Company are proud of this family of patriots. The six service stars hanging in a front window at the Bellevue home of the Sullivans are an example of just how important this business of war is to this American family.

THE SULTAN

Like the Maharajah of Indore who is the envy of lesser individuals when it comes to counting wives, Tool Crib Supervisor Ed Yohey is the envy of nearly every other department head in the Nebraska plant because of his choice collection of pulchritudinous femininity.

Yohey has under his supervision nearly eighty young women, "and they're all right out of the top drawer when it comes to looks."

According to the Tool Crib chief, those who are in the habit of addressing him as "Sultan Yohey," the "Rajah," or "Brigham Young" are just jealous. He refuses to be kidded, declaring that "attractive surroundings make for efficiency, rather than otherwise."

★ ★ ★

Silent Faust

Chief Estimator Brit Thompson just didn't get the idea at all, according to Liaison Officer T. J. Corcoran.

According to Corcoran, the bright red, full-length flannel underwear presented Thompson were designed and intended to help that gentleman keep warm. Thompson, however, had other ideas.

Retiring to a bedroom, he pulled on the brilliant and amazing apparel which hit him just below the chest and extended ankleward. Grabbing a sword, a relic of another era, he pranced into the room, where he gave a first-class impersonation of Mephistopheles in "Faust." The audience, quite naturally, called for an encore.

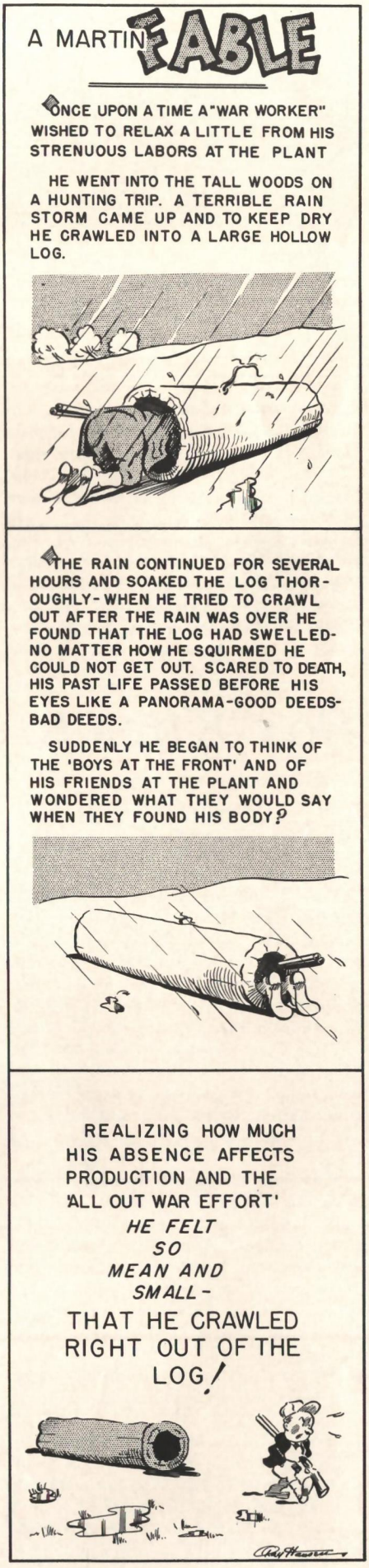
STORK DEPARTMENT

To Mr. and Mrs. Irving Chudacoff (Metal Bench Inspection) a boy, 5 lbs., January 21, 1943 ★ To Mr. and Mrs. Charles Hampton (Production, first shift) a girl, 6 lbs., January 20, 1943 ★ To Mr. and Mrs. Carl Wolf (Senior Foreman, Assembly, first shift) a boy, 6 lbs. 12 ozs., January 17, 1943 ★ To Mr. and Mrs. Joe Wessolowski (Timekeeping Modification, first shift) a daughter, January 22, 1943 ★ To Mr. and Mrs. J. A. Davis (Flight Engineer) a son, Leo Alvin, January 9, 1943 ★ To Mr. and Mrs. Frank Walker (Superintendent of Sub-Assembly) twin girls, January 29, 1943 ★ To Mr. and Mrs. O. C. Sanders (Sub-Foreman of Welding) a girl, 7 lbs. 12 ozs., Sunday, January 31, 1943 ★ To Mr. and Mrs. Kenneth Lott (Welding) a boy, February 4, 1943 ★ To Mr. and Mrs. Jack Canady (Machine Shop) a girl, January 25, 1943. ★ To Mr. and Mrs. Ed Rosen (Flight Operations) a son, January 26, 1943 ★ To Mr. and Mrs. Richard C. Pedersen (Final Assembly) a daughter, January 1, 7 lbs., 2 ozs. ★ To Mr. and Mrs. Wayne Jones (Production) a daughter, January 22, 1943 ★ To Mr. and Mrs. Walter Carroll (Accounting, Modification) a daughter, 7 lbs. 2 ozs., February 1, 1943 ★ To Mr. and Mrs. Joseph Chytka (Final Assembly) a daughter, January 31, 1943 ★ To Mr. and Mrs. Jack Riche (Final Assembly) a daughter, February 3, 1943 ★ To Mr. and Mrs. Roy Lonn (Final Assembly) a daughter, 7 lbs. 2 ozs., January 31, 1943.

Orange Blossom Department

Darlene Dresler (Purchasing) to Aviation Cadet Jack Daly, February 19 ★ Dorothy Eacker (Modification) to Virgil Piercy (Modification), January 19 ★ Henry Dell Ratcliff (Production) to Jim Childs (Inspection), February 5 ★ Rose Salavec (Final Assembly) to Robert Soby (Final Assembly), April 2 ★ Virginia Wiles to Dwayne Nelson (Final Assembly, Electrical), February 6.

A MARTIN FABLE


ONCE UPON A TIME A "WAR WORKER" WISHED TO RELAX A LITTLE FROM HIS STRENUOUS LABORS AT THE PLANT
HE WENT INTO THE TALL WOODS ON A HUNTING TRIP. A TERRIBLE RAIN STORM CAME UP AND TO KEEP DRY HE CRAWLED INTO A LARGE HOLLOW LOG.
THE RAIN CONTINUED FOR SEVERAL HOURS AND SOAKED THE LOG THOROUGHLY - WHEN HE TRIED TO CRAWL OUT AFTER THE RAIN WAS OVER HE FOUND THAT THE LOG HAD SWELLED - NO MATTER HOW HE SQUIRMED HE COULD NOT GET OUT. SCARED TO DEATH, HIS PAST LIFE PASSED BEFORE HIS EYES LIKE A PANORAMA - GOOD DEEDS - BAD DEEDS.
SUDDENLY HE BEGAN TO THINK OF THE 'BOYS AT THE FRONT' AND OF HIS FRIENDS AT THE PLANT AND WONDERED WHAT THEY WOULD SAY WHEN THEY FOUND HIS BODY?
REALIZING HOW MUCH HIS ABSENCE AFFECTS PRODUCTION AND THE 'ALL OUT WAR EFFORT'
HE FELT SO MEAN AND SMALL -
THAT HE CRAWLED RIGHT OUT OF THE LOG!

FAREWELL

Members of the Raw Stores Department held a farewell party recently for seven of its members, all of whom are going into the armed forces soon. The affair took place at the Catholic Social Hall in Omaha.

Moving from the production front to the fighting front are: Tommy Lotta, Jack Carman, Allen Mason, Bob Johnson, Don Friend, Larry Rolfe and Bob Reynolds. There were over eighty present for the party, which was highlighted by the presentation of cash awards to the honored future soldiers.

A special musical program was presented by the Raw Stores quartette, which is composed of Charles Denney, Eddie Sedlacek, Glen Gardener, and Walt Harms. Harry Schlekau accompanied the singers and also entertained with several of his favorite selections.

Wayne Delaney, Cliff Peterson, Harold Lidwich and Charles Denney were in charge of arrangements.

★ ★ ★

Heads for the Top

Well on his way to success on the production front, is Ralph Orduna, young Omaha colored boy, who joined the Martin-Nebraska Company last June as a helper in Final Assembly. His eagerness to do his job "just a little" better than was expected has resulted in speedy advancement. Today young Orduna is a leadman in the splicing division of Final Assembly, a job that requires technical knowledge of aircraft assembly.

A graduate of Omaha's South High School, Ralph continued his education at Technical High School, where he majored in aircraft construction.

Orduna, a member of the Army Air Reserve, expects to be called into active duty within the next few months.

★ ★ ★

They'll Fly 'em Now

The men and women battling on the production front at the Martin-Nebraska Company plant have recently bidden farewell to several Martineers who have been called into the armed services. Listed among those who have left the Company during the past month to enter the Army Air Forces are the following: Wymer Gene Vogel, Assembly; Robert Meyer, Assembly; Herschel Dueker, Finishing & Plating; Wm. E. Baxter, Sheet Metal; Calvin Fay Madison, Final Assembly; Dudley R. Wilber, Assembly; Vern L. Jones, Finishing & Plating; John E. Fuhrman, Inspection; Gerald Dean Andes, Inspection; Ervin E. Rohlf, Raw Stores; Walden Forke, Assembly; and Raymond Uher, Henry Hier, and Eldon Grouer, all of Inspection.

★ ★ ★

You Don't Have To Tell Everything.

Four Complete 100 Years' Service

[*Continued from page 5*]

Thomas B. Soden, who as director of industrial relations has the task of looking after the happiness and welfare of his thousands of fellow-Martineers, came to Martin's as a woodcraftsman. The route lay through Kilmarnock in Scotland through the Cape of Good Hope, Cleveland, Panama and then back to Cleveland. His first job here was making wood detail parts; soon he was foreman of the entire wood shop.

The all-metal plane came. Mr. Soden taught himself to work metal, taught his fellow woodcraftsmen to work metal. The first order of all-metal planes went out on schedule.

When the plant moved to Baltimore, he became general foreman, then assistant superintendent, then superintendent, then factory manager, and now director of industrial relations.

Henry J. Kramer, general foreman of Small Parts Division, PBM-3, is another woodcraftsman who weathered the shift from wood planes to metal ones. He started out helping make wooden wing ribs, soon took charge of the whole rib department.

Then the old story: wood out, metal in. Mr. Kramer stuck with the job—stuck so well, in fact, that he hasn't missed a day's work in his twenty-five years. When the Navy called for the PBM-3, he was right there. Today he builds their center wings and detail parts that go elsewhere in the plane.

Walter C. Pike, superintendent of Maintenance, has held that job twenty-four of his twenty-five years. That doesn't mean he's been standing still twenty-four years: where he and a handful of men used to look after one building in Cleveland, he and his staff now handle the maintenance of Plant 1, the B-26 Army Division, and a number of buildings in town.

Mr. Pike and his men and women set up factory machinery, repair electrical breakdowns, keep plumbing working, and keep in working order such contraptions as heat-treat furnaces, time clocks, auto call system, elevators, overhead cranes, electric trucks, lighting systems, typewriters, buzzers and cash registers. His phone is usually busy.

Ladies and gentlemen, we give you a hundred years on the job: Mr. Vollmer, Mr. Soden, Mr. Kramer, Mr. Pike.

★ ★ ★

HOLD DINNER-DANCE

A dinner-dance was held by 154 members of Finishing & Plating, first shift, Plant 1, at Sellmayer's Hall. The music of Bill Yaeger and unusual refreshments featured the proceedings. Vance Stitt was the committee chairman, aided by Jim Shepling and George Homberg.

VISITORS. *Maj.-Gen. Oliver P. Echols, Chief of Materiel Command, and Lt.-Gen. William S. Knudsen, Chief of Procurement, recently visited the plants and talked with William K. Ebel, Maj. H. F. Saehlenou, Harry T. Rowland, Glenn L. Martin and H. F. Vollmer.*

VICTIM OF CRASH

Friends and former associates recently learned of the death in an airplane crash of Lieut. Edward T. Layfield, Air Corps, U.S.A. Layfield was a final assemblyman in Plant 1 from December 2, 1940, until August 28, 1941. Born in Hampton, Va., Layfield attended Charles City High School and later attended Vocational in Baltimore, graduating in 1936. He matriculated to the University of Baltimore, where he studied law two years.

HILMER IN CHARGE OF MODIFICATION CENTER

William Hilmer, superintendent, Body Department, has been appointed superintendent of the new Modification Center for "Mariners" near Annapolis. Alexander J. Brescia, his assistant, is acting superintendent in his absence.

Mr. Hilmer was first employed by the Martin Company in 1929. He has been a carpenter, woodworker, assistant foreman, foreman and superintendent. Mr. Brescia arrived a year later and has been with the Company, excepting for an eighteen-month period, ever since as mechanic, leader, sub-foreman, foreman, night supervisor and assistant to Mr. Hilmer.

★ ★ ★

USES INGENUITY

Vernon Morris, Body, Army Division, first shift, took quite seriously his instructions to report for work the day after the shutdown. Morris called every taxi company in the city. The answer was the same everywhere. No. So he called the Office of Defense Transportation. They secured a cab for him and he put in his usual day's work.

Box Kites to Bombers

[*Continued from page 13*]

ing it, the United States Navy was beginning the development of a set of techniques that the war lords of a new World War were to copy with devastating effect.

Torpedo operations with airplanes was not new. The Navy had tried it out with several types of airplanes, including a variation of the Martin MB-2. But now specifications were laid down for a bomber designed especially for torpedo launching. Martin won the contract for thirty-five of these ships, which were designated the SC-1, and seven months later "Cy" Caldwell, famed test pilot and now the revered silver-haired writer and authority on aviation affairs, took it up for its first tests.

This spraddle-legged beauty, slinging a vicious torpedo between its specially-built landing gear, was a formidable weapon indeed. And before the contract was more than half finished, Martin had an order for forty more of an improved type, the SC-2. These were succeeded in 1926 by the famous "TM" ships—"three-purpose airplanes," suitable for torpedo craft, bombers or observation planes. The Navy was going in for these ships in a big way.

Of the T3M-1's Martin built a hundred. Then the Bureau of Aeronautics pyramided its discoveries. Why not a torpedo bomber that could be launched from a carrier? So Martin was ordered to build a variation, the T4M-1—still a three-purpose airplane, but with the carrier operation as an added feature. It was a success and a contract for 102 of the biplanes was signed.

Meanwhile, the Navy had been experimenting with a new idea—dive-bombing. It was an unfamiliar term, but it developed, as history was to prove. The first early trials had been with small bombs carried on airplanes not feasible for the job. Now Martin came into the picture with a new plane, the XT5M-1, built especially as a dive-bomber to carry demolition bombs, and the first airplane to carry a 1,000-pound bomb in a terminal-velocity dive. This was to lead to the famed Martin BM-1 and BM-2 ships, which really set up the devastating art of dive-bombing several years later.

But things were getting too hot for the St. Clair Avenue plant at Cleveland. It was crowded to the doors and now it was apparent that the Navy was to go heavily into patrol boats, and Martin was to build them. Besides, Glenn Martin was thinking of much bigger boats—craft that would fulfill his old prediction of a score of years before. He wanted to be on tidewater. He wanted to be near Washington. He walked out of his busy office, packed a suitcase and headed for the Atlantic coast.

The move to Baltimore, the patrol bomber era and Martin's own "secret weapon" will be described in the next installment.

A BOMBER IS BORN

THE ENGINEER'S JOB

Copyright 1943, The Glenn L. Martin Company

THE mammoth job of creating a Martin bomber and getting it in quantity to our fighting men involves thousands upon thousands of Martineers working at every possible post from president down. Last month, on this page, we gave an over-all picture of the process as it involved the major departments of the plant. This month we describe Engineering's part of the job; in succeeding issues we will speak of the role played by other departments.

The Army, for example, asks us to design and produce in quantity a bomber to perform a designated mission. Preliminary specifications have been written, as the saying goes, on the battlefield. But specifications can't fly and drop bombs; the engineers must conceive a definite plane.

The start, naturally enough, by studying the Army's specifications. These detail what is wanted in speed, range, service ceiling, armament, size and number of bombs, and number of crew. We are fighting a highly resourceful enemy; the accomplishments asked for will probably be just within the realm of the possible. The engineers, like the rest of the plant, have a real job cut out for them.

They set out by making a general arrangement layout of an "air frame." It will be the task of this air frame to carry all the offensive, defensive and auxiliary equipment desired, and at the same time deliver the performance required. An hour's hard thinking in this initial stage can save thousands of hours later—engineering hours, manufacturing hours, inspection hours—and each hour saved brings victory one hour nearer. So not only do the engineers work as fast as they can and still do a good job; they take care to design a plane that their fellow-Martineers can bring into being rapidly. Time waits for no man, and neither does Hitler.

Weight is another factor the designers keep very much in mind as they pore over their drawing boards. Each pound safely spared means one more pound of bombs for the Axis, and engineers think of that as they plan. In roughing out the fuselage, wings, tail surfaces and landing gear, they save every ounce possible, knowing it will go into fuel or bombs.

AT the same time, being engineers, they are thinking of performance, stability and control. They want their offspring to be able to take off in as short as possible a distance, to climb rapidly to its service ceiling, to go like the wind when it gets up there, and to have outstanding stability and control. In brief, they want their bomber to do everything anybody's bomber can do and a lot more, and last the five years that military planes are designed to last. The lad who wins in a fight is the one who is still there at the finish, and they mean to have their lad there at the finish.

With all this in mind, conferences are held among the designers of the various portions of the plane. Representatives of Manufacturing and Inspection are present—as indeed they are all through the conception of the plane—to get a line on the tools and materials that will be needed, and to offer their experience in the actual building of planes. Lengthy and intricate calculations are made, which will end up in the form of "proposal drawings" showing the plane from the top, side, front, internally and in sections.

Meanwhile the men and women out in Experimental, which is practically an aircraft plant in itself, have been building a full-sized wood-and-cloth mockup of the plane and small-scale wooden wind-tunnel models. From the mockup they will be able better to visualize what the finished plane is going to look like; from it they can also make sure that enough elbow-room has been provided for pilots, bombardier, radio man, navigator and gunners.

From the smaller wind-tunnel models they will get a line on aerodynamic characteristics of the plane they are designing. Any changes that the study of the wind-tunnel models or of the mockup indicate as advisable are incorporated in the proposal drawings. The drawings, together with the calculations and necessary revisions in the original specifications, go to the Army for approval.

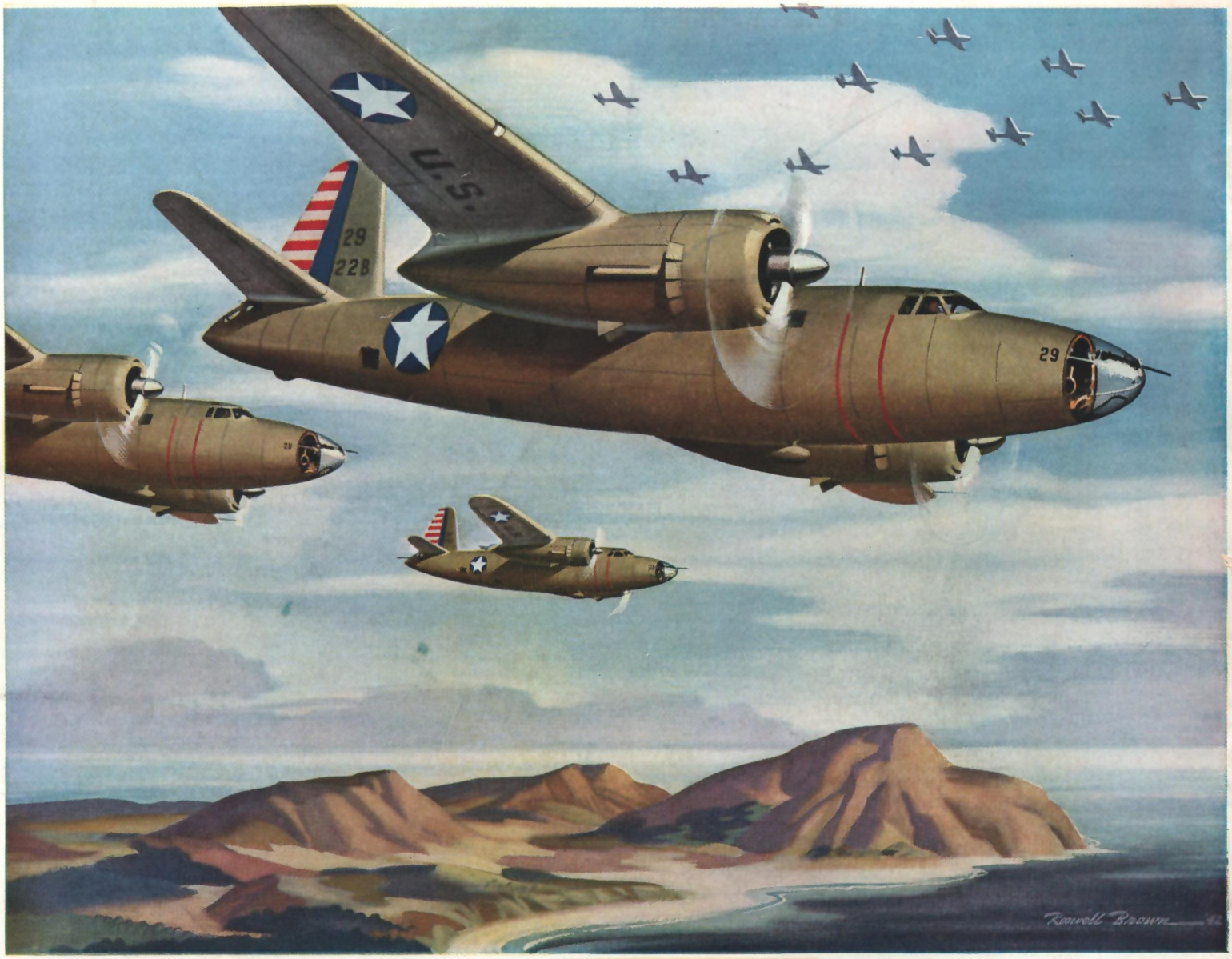
The Army studies the proposed bomber, suggests changes here and there, and orders it turned out in quantity. Now comes the task of designing the plane more in detail. Twenty-nine different varieties of engineers team up for the job. These include aerodynamicists, authorities on weights and strength of materials, and experts on such matters as wings, fuselages, standards, power plants, hydraulics, electricity, landing gear, equipment and armament. The result of this phase of their labors will be layout drawings showing the various parts of the plane.

As each layout is completed and the sufficiency of the part agreed on, the task of designing the parts in their every detail starts. This means thousands of drawings, each of which must be checked and then analyzed by stress and weight engineers. Then the drawings become blueprints and templates—a formerly laborious job now tremendously expedited by the use of a special photographic reproduction process for which Martin is known throughout the industry. There will be thousands upon thousands of these, weighing ton upon ton; from them, using the tools and materials Production Control has been accumulating and will continue to accumulate, the men and women out in the shops will build the actual planes. At their sides at all times will be members of Inspection, there to guarantee thorough Martin workmanship on each item from the tiniest rivet to the completed plane.

EVEN with every last drawing turned into blueprints or templates, even with the planes moving up the line and coming off the assembly floor, the engineers' part of the creation of the new bomber is by no means done. Day-to-day contact with the enemy will cause the Army to suggest changes in the new model. New discoveries by aerodynamicists and experiences out in the shop will suggest other changes. It will be the engineers' job to design these changes and incorporate them in the planes. Only by these constant improvements can the engineers and their fellow-Martineers be sure that our boys at the front get the best to be had.

On this page next month will be described the task of Production Control and of Tool Design--both functions of Manufacturing--in providing the tools and materials to turn out the new plane in quantity.

"Planes that are not produced don't drop bombs"



BY DIRECT WIRE FROM
WESTERN UNION

R. B. WHITE, PRESIDENT
NEWCOMB CARLTON, CHAIRMAN OF THE BOARD
J. C. WILLEVER, FIRST VICE-PRESIDENT

1221

SYMBOLS
DL = Day Letter
NT = Overnight Telegram
LC = Deferred Cable
NLT = Cable Night Letter
Ship Radiogram

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination.

WASHINGTON DC FEB 13 1047 P

THE GLENN L MARTIN CO
BALTIMORE MD

THREE THINGS ARE SIGNIFICANT IN THE REPORTS OF THE FIRST RAID ON SARDINIA BY THE TWELFTH AIR FORCE EARLY IN FEBRUARY. THE REPORT STATES (1) THAT THE ATTACK WAS "VERY SUCCESSFUL." (2) THAT TWO ENEMY PLANES WERE SHOT DOWN BY MARAUDER GUNFIRE AND (3) THAT ALL AMERICAN AIRCRAFT RETURNED SAFELY. EACH OF THOSE STATEMENTS SHOULD FILL YOU WITH PRIDE, SHARED WITH THE MEN WHO MANNED THOSE BOMBERS. FOR YOU, BY YOUR IN-DUSTRY AND YOUR SKILL HELPED CARRY OUT THAT ATTACK, HELPED HEW DOWN THOSE ENEMY PLANES, HELPED BRING OUR PLANES HOME SAFELY. THE VERY FACT THAT THOSE PLANES WERE ON HAND TO BOMB THE SARDINIAN AIR BASE IS INDICATIVE OF YOUR PRODUCTION MIGHT. PLANES THAT ARE NOT PRODUCED DON'T DROP BOMBS.

GEORGE E STRATEMEYER
MAJOR GENERAL
CHIEF OF AIR STAFF, ARMY AIR FORCES

Artist Roswell Brown's painting reproduced above is printed by courtesy of *The Orange Disk*, house organ of the Gulf Oil Company, which used it as the front cover for the January-February, 1943, issue.